

# ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **12-MAY-2023** TIME: **1605** HOURS

2. OPERATOR: **Talos ERT LLC**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K **\$730,000**
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR  
ON SITE AT TIME OF INCIDENT:

4. LEASE: **G02280**

AREA: **SM** LATITUDE:

BLOCK: **130** LONGITUDE:

5. PLATFORM: **B**

RIG NAME:

6. ACTIVITY:
- EXPLORATION(POE)
  - DEVELOPMENT/PRODUCTION (DOCD/POD)

7. TYPE:

INJURIES:

- HISTORIC INJURY
- OPERATOR
- CONTRACTOR
- REQUIRED EVACUATION
- LTA (1-3 days)
- LTA (>3 days)
- RW/JT (1-3 days)
- RW/JT (>3 days)
- FATALITY
- Other Injury

- POLLUTION
- FIRE
- EXPLOSION

- LWC
- HISTORIC BLOWOUT
  - UNDERGROUND
  - SURFACE
  - DEVERTER
  - SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION  HISTORIC  >\$25K  <=\$25K

8. OPERATION:

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- DECOMMISSIONING
- PA  PIPELINE  SITE CLEARANCE
- TA  PLATFORM
- OTHER

9. CAUSE:

- EQUIPMENT FAILURE
- HUMAN ERROR
- EXTERNAL DAMAGE
- SLIP/TRIP/FALL
- WEATHER RELATED
- LEAK
- UPSET H2O TREATING
- OVERBOARD DRILLING FLUID
- OTHER \_\_\_\_\_

10. WATER DEPTH: **215** FT.

11. DISTANCE FROM SHORE: **79** MI.

12. WIND DIRECTION:  
SPEED: M.P.H.

13. CURRENT DIRECTION:  
SPEED: M.P.H.

14. SEA STATE: FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

On May 12, 2023, at approximately 1605 hours, a crane boom collapse occurred on the Talos ERT LLC (Talos) OCS-G02280 South Marsh Island (SM) 130 B Facility. While attempting to lower a basket of grating to the top deck, the boom cable broke causing the boom and the load to collapse and land on the top deck. The boom collapsed with approximately \$330,000 in damage cost to the deck and production equipment and \$370,000 in crane damage cost. There were no injuries to personnel.

#### Sequence of Events:

On May 12, 2023, the motor vessel (MV) Ms. Peggy Ann arrived on location at approximately 1430 hours to offload construction equipment. The crane operator began unloading the construction equipment which consisted of 10 lifts using the fast line. The eleventh lift was a grating rack that weighed approximately 11,000 lbs. The grating rack was lifted with the four-part load line. The grating rack was lifted from the MV's back deck; subsequently the crane operator began to lower the grating rack on the top deck of the platform. When the grating rack was approximately 6 ft. from the top deck and the boom angle was at 76-degrees, the boom cable failed causing the boom to collapse and land on the top deck. The grating rack landed on the top deck damaging a small section of grating. The first section of the crane boom landed on a shipping container used for storage but did not cause any damage to the container. After initial impact, the boom tip folded over the container and hovered a few feet over the production deck where production guardrails, production process piping, and a test header valve were damaged.

#### BSEE INVESTIGATION:

On May 12, 2023, the Bureau of Safety & Environmental Enforcement (BSEE) Lafayette District (LD) Accident Investigator (AI) received a phone call notification of a crane boom failure that occurred on Talos's SM 130 B Facility. The AI requested additional information pertaining to the incident such as the Job Safety Analysis (JSA), crane inspections, crane lifting procedure, statements, and other relevant documents from Talos.

The BSEE LD AI and Inspectors conducted an onsite investigation at SM -130 B on May 15, 2023. BSEE conducted interviews with the personnel involved with the lifting operations and the annual crane inspection. According to the last annual crane inspection that was conducted on May 4, 2023, the boom cable was installed on May 28, 2021, with a breaking strength of 51,000 lbs. The .645 caliper diameter of the boom cable recorded on the annual inspections between installation and the cable failure had not changed. Also, there were no discrepancies found with the boom cable on the last annual crane inspection. A pull test of 35,200 lbs. was conducted during the annual inspection. Since the boom cable installation on May 28, 2021, the crane accumulated a total of 124 hours of run time.

On July 20, 2023, Talos sent four samples of the failed boom cable to Core Lifting located in Broussard, Louisiana for analysis and testing. Core Lifting conducted 4 break tests on 12' sections of the failed cable. The BSEE Lafayette District Production Supervisory Inspector (SI) and AI were onsite to witness the break test. The results of the testing indicated the boom cable failed as a result of fatigue from numerous cycles of the rope through the bridle sheaves. This was determined by the presence of numerous short pieces of wire embedded in the boom cable with fatigue fractures at both ends. The sheaves are 13" in diameter by 5/8" and were visually inspected when the boom cable was removed. Even though there was no damage to the sheaves, the bridle was replaced.

Due to the layout of the facility, the crane is used most frequently at a 60-to-75-degree boom angle. The usage at that angle is believed to have contributed to the strain and wear on the failed section of the boom cable. There was no evidence of corrosion in the core of the cable, but it was noted during the analysis that the "Lubriplate" lubrication used on the boom cable failed to penetrate the core of the

cable. Talos suspected a defective spool of cable may have caused the incident so, the boom cable from the same spool was removed from another crane on a different Talos location, tested and passed.

BSEE requested an inspection of the bridle assembly as well as the results of the inspection. Talos sent the bridle to Sparrows to ensure a non-biased inspection. The results concluded that it did not appear that the bridle directly contributed to the boom cable failure.

**CONCLUSION:**

A failure analysis report completed by Core Lifting indicated that the boom cable failed as a result of fatigue of the boom cable from numerous cycles of a confined area of the boom cable through the bridle sheaves. This is evidenced by the presence of numerous short pieces of wire embedded in the boom cable with fatigue fractures at both ends.

As a result of the Core Lifting results, Talos has revised crane policies, procedures, and inspections concerning wire rope, which include:

- Talos will replace wire rope when the dimension of the wire rope reaches its nominal wire rope size and not the reduction size as per API RP 2D (Sixth Edition) G.5.1.3 - 8 Wire Rope Replacement Criteria.
- Include additional wire rope micrometer evaluations of the boom cable on all Talos operated cranes during quarterly and annual inspection schedules. Readings will be taken in areas of high rotation and wear.
- Conduct boom cable replacement at a maximum of 100 hours or within one year on the SMI-130B crane to determine adequate wire rope replacement criteria and crane function.

18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

Equipment Failure: Core Lifting is a testing and inspection company for cranes and crane cables located in Broussard, Louisiana. On July 20, 2023, Core Lifting conducted 4 break tests on 12' sections of the failed cable. The BSEE Lafayette District Production SI and AI were onsite to witness the break tests. It was determined by Core Lifting's inspection of the boom cable and the break test that the boom failure was caused by fatigue and overuse of a confined area of the boom cable.

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

During the analysis, it was found that the "Lubriplate" lubrication used on the boom cable failed to penetrate the core of the cable. Talos is searching for an alternative lubrication that will provide ample penetration to the cable core.

Equipment Failure - Inadequate preventative maintenance: wire rope evaluations failed to recognize the fatigue occurring in the confined area of the boom cable.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

**Crane Boom**

**Boom Cable Failure**

ESTIMATED AMOUNT (TOTAL): **\$730,000**

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

**The BSEE Lafayette District office makes no recommendations to the Regional Office of Incident Investigations (OII).**

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

**NA**

25. DATE OF ONSITE INVESTIGATION:

28. ACCIDENT CLASSIFICATION:

**15-MAY-2023**

26. Investigation Team Members/Panel Members:

29. ACCIDENT INVESTIGATION PANEL FORMED:

**E Ortiz / C Morvant / W Guillotte /**

**NO**

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

**Mark Malbrue**

APPROVED

DATE:

**14-DEC-2023**